

October 1912

TRANSACTIONS

OF THE

BRITISH SOCIETY FOR THE

STUDY OF ORTHODONTIA.

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According to Mr. G. Northcote
bond volume - it would
appear likely that this
relates to presentations at a
meeting in October 1908.

Acc

“ PROPORTIONS OF THE NORMAL DENTAL ARCHES ” **(TEMPORARY AND PERMANENT.)**

THE British Society for the Study of Orthodontia has appointed a committee to ascertain what work has been done up to the present by way of ascertaining the proportions of the different types of normal dental arches, and applying this knowledge to the treatment of actual cases in practice. It is thought that just as human skulls are classified according to the cephalic index which is based on the measurements of length and breadth, so the study of dental arches, based also on anthropological methods might be of great service as a basis for the more serious study of Orthodontia. The society is, therefore, anxious to ascertain whether any measurements of normal arches have been made with this object in view, and will be grateful for any references to papers which have been published on the subject in any language, or for the names of any who have been occupied in a research of this kind.

The committee would indicate the following as the points upon which they will be glad to have any specific information or statistics either regarding the temporary or permanent arches :—

1. Relation of length of arch to breadth : What were the methods of measurement, and what points were taken to measure between ?
2. Relation of size of teeth to size of arch : What method of determining this correlation was adopted ?
3. Height of palate : Points of measurement used to determine this ?

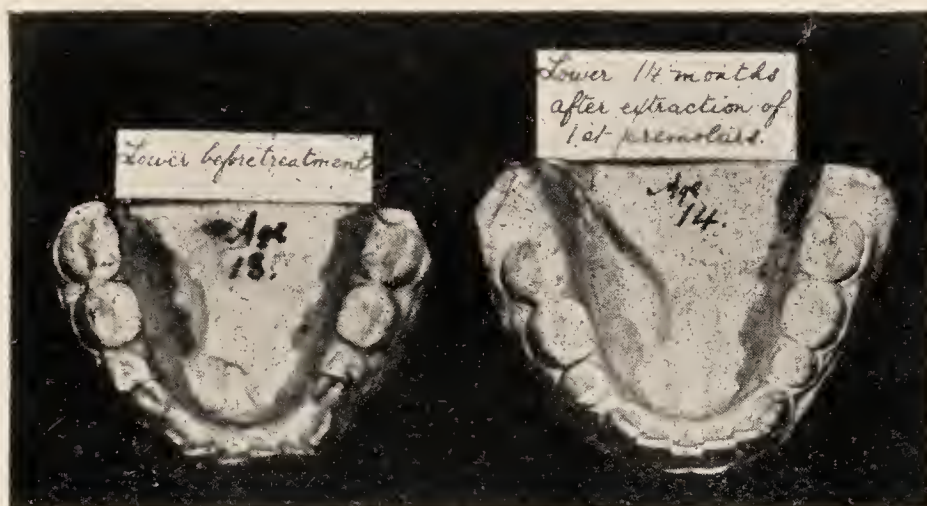
Any information bearing on this subject, or reference to papers, will be gratefully received by—

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CASE I (a).

Upper, before and fourteen months after treatment.



CASE I (b).

Lower, before and fourteen months after treatment.



CASE 2 (a).

Shows irregularity.



CASE 2 (b).

Shows occlusion.

TO ILLUSTRATE MR. MAURICE'S CASES.



CASE I (c).

Dimension A reduced from $1\frac{11}{32}$ to $1\frac{9}{32}$.
 „ B „ „ $1\frac{9}{32}$ to $1\frac{6}{32}$.
 „ C „ „ $1\frac{11}{16}$ to $1\frac{9}{16}$.

TO ILLUSTRATE MR. MAURICE'S CASES.

ORDINARY MEETING.

AN ordinary meeting for the exhibition of cases was held in the rooms of the Medical Society, Chandos Street, Cavendish Square, MR. J. H. BADCOCK, President, being in the chair.

The minutes having been read and confirmed, the following cases were shown :—

MR. MAURICE'S CASES.

MR. MAURICE said : I wish to shew this evening two cases for which I do not claim any originality, but which, nevertheless, seem to me to be worthy the attention of this society.

1. The first is a case shewing the result of treatment of general overcrowding of both jaws by extraction of four first premolars. The models taken in May, 1907, when the patient was just 13 years of age, shew considerable overlapping of the lower incisors, the lower second premolars have no room to erupt properly, and both upper canines are everted or rotated inwards. Owing to the prominent appearance of the teeth and lower part of the face, I decided to remove the four first premolars. This was done, and I now shew side by side with the models of the upper and lower jaws respectively models of the same taken in July of this year, fourteen months after treatment. The overlapping of the lower incisors has disappeared, the lower second premolars have erupted into correct occlusion, the upper canines have assumed nearly their normal position, and the facial appearance of the patient is much improved. There is very little space between the canines and the second premolars and as the patient is still only 14, I have no doubt that will close up entirely before long. Altogether, I look upon the result as a strong argument for extraction instead of the prolonged wearing of appliances in many cases of overcrowding of the dental arch.

2. The second case is of a different character. We have much discussion from time to time about the causes of irregularities of the teeth and here I have models to shew an irregularity in the making. The patient, a little girl of 9½, has on the left side normal occlusion, and an absence of decay. On the right side the mandibular teeth are in normal positions, and there is no decay, but in the maxilla the first temporary molar is carious mesially and distally to such an extent as to reduce its mesio-distal diameter

by about one-half and the second temporary molar is also badly carious mesially. As a result of this these two teeth have been closed in on one another and on the temporary canine by the erupting first permanent molar to such an extent that that tooth has been able, in its backward and downward path to describe an arc of an abnormally small circle and therefore to erupt a tooth's diameter mesially to its correct position. The resulting condition, commonly called distal occlusion, is really a case of mesial occlusion of the maxillary first molar.

In replying, MR. MAURICE drew attention to the changed dimensions of the first case during the 14 months that had elapsed between the operation and the taking of the recent models. The measurement between the first upper molars taken from the nearest points of their necks had fallen from $1\frac{11}{32}$ inch to $1\frac{9}{32}$ inch; between the second upper premolars from $1\frac{9}{32}$ to $1\frac{6}{32}$, and from the middle of the junction of the occlusal and distal surfaces of the first upper molar to the mesio-incisal angle of the central incisor of the same side from $1\frac{11}{16}$ to $1\frac{9}{16}$ inch.

MR. GEORGE NORTHCROFT'S CASES.

I want to present to-night two cases, which have been treated by two different methods, by way of contrast.

Case 31. Class II. Division 2. (Angle).

Case 82. Class II. Division 1. (Angle).

CASES REPRODUCED FROM CASE BOOK.

1a.				1b.			
Name ..	..	..	Miss I. H.	Name ..	..	..	Miss E. C.
No. of case ..	..	..	31	No. of case ..	..	..	82
Date of birth..	..	..	June, 1890	Date of birth..	..	..	August, 1892
Classification ..	II. 2 (Angle), possibly div. 1			Classification ..	..	II. 1 (Angle)	
Dentition ..	6 5 4 3 2 1 | 1 2 3 4 5 6			Dentition ..	6 e c 2 1 | 1 2 c d e 6 7		
Mutilation .	Removed 4 | 4, October, 1901			Mutilation .	Too early extraction of c. | c.		
Method of feeding ..	..	..	—	Method of feeding ..	..	..	Bottle fed
Method of breathing..	..	..	Normal	Method of breathing..	..	..	Mouth breather
Method of sleeping ..	..	..	—	Method of sleeping ..	..	..	—
Family characteristics ..	..	..	—	Family characteristics ..	..	..	—
Surgical operations ..	..	..	—	Surgical operations ..	..	..	—
Congenital or acquired diseases ..	..	..	Scarlet fever, July, 1901	Congenital or acquired diseases ..	..	..	Rheumatism in 1906
Width of central incisor, &c..	..	..	9.2 m.m.	Width of central incisor, &c..	..	..	8.6 m.m.
Date of first visit ..	..	..	June 1st, 1901	Date of first visit ..	..	..	May, 1904
Date of starting treatment ..	..	..	June 8th, 1901	Date of starting treatment ..	..	..	June, 1904
..	..	..	Abandoned in July, 1901	..	..	..	June, 1904
Date of first retention ..	..	..	—	Date of first retention ..	..	..	June, 1904
Date of removal of retention .	..	..	—	Date of removal of retention ..	..	..	June, 1904
Total number of visits ..	..	..	2	Total number of visits ..	..	..	June, 1904
Date.	No. of Model.			Date.	No. of Model.		
				25, V., 1904	82	Imp.	
				8, VI., 1904	82	Put in upper and lower D. bands	
				11, VI., 1904	82	Exam.	
				15, VI., 1904	82	Exam.	

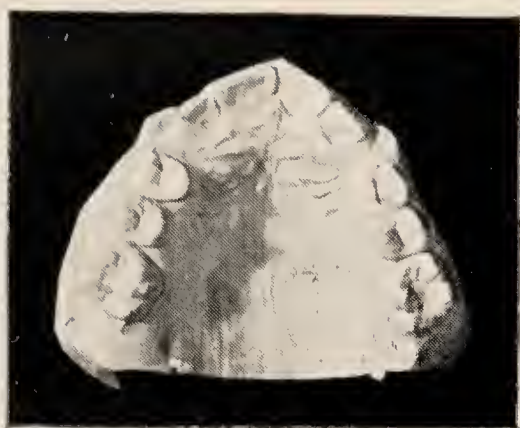


FIG. 2.

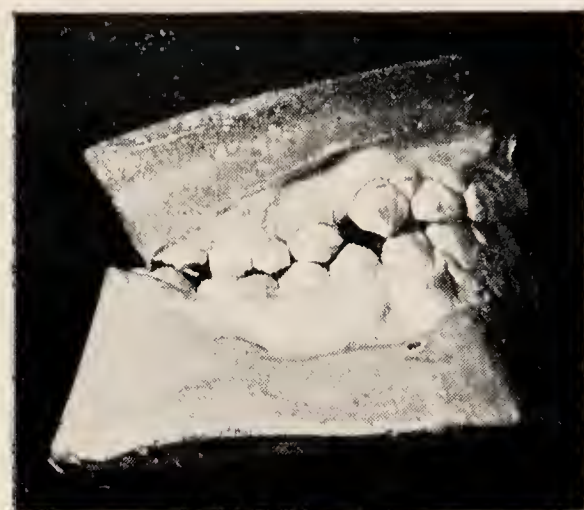


FIG. 3.

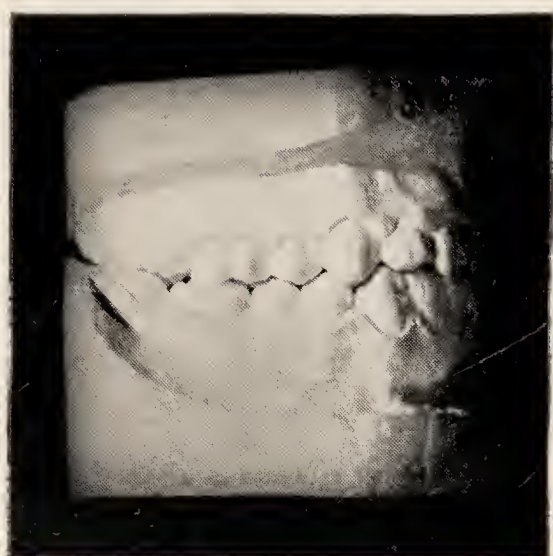


FIG. 4.



FIG. 5.



FIG. 6.



FIG. 7.



FIG. 8.

TO ILLUSTRATE MR. NORTHCROFT'S CASES.



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Diagrams Ia. and Ib. show the Orthodontia Case Cards which I have adopted. These contain the details of cases as far as known. In case 31 it will be noticed that owing to the illness of the patient, and removal to the country, treatment by appliances was abandoned, and extraction $4 \mid 4$ resorted to.

Fig. II., case 31, shows the upper jaw before treatment, and III. the right side after extraction. The number of visits involved was only two, the first to take models and come to a decision, the second to operate; the result being left entirely to nature.

This was fairly satisfactory, but it will be noticed, that contraction of the upper jaw remained, and that $\overline{3}$ is in labial occlusion. Also the patient's appearance to the trained eye shows the loss of upper pre-molars.

Figs. IV. and V. show right and left sides after seven years.

I believe that it is only in such cases of Class II. that extraction is at all justifiable, and then in the upper jaw only.

In Fig. VI., case 82, the profile was distinctly bad, extraction would have been worse than useless, as thereby the masticating function would have been reduced to a minimum, both by loss of teeth and faulty position, and no improvement in appearance would have taken place. Intermaxillary traction was used, and watched once a week for six months, a biting plate, and spur and plane attached to $\overline{6} \mid \overline{6}$ were adopted for retention, which continued until $\overline{7} \mid \overline{7}$ had erupted, then the case was considered completed.

The time occupied in treatment necessarily spread over a long period, but the result undoubtedly justified the trouble involved, the appearance and masticating power being all that could be desired, and the teeth free from caries.

Figs. VII. and VIII. show right and left sides after treatment.

MR. M. HOPSON'S CASE.

Little girl of 8 with very marked inferior protrusion, treated with reversed Baker Anchorage. The first effect has been to open the bite, but the lower incisors are already behind the uppers, and the appearance of the child much improved. Present condition of the case transitional and has been four months under treatment. When first seen the articulation was such that the mandible was one mandibular molar anterior to the normal, and at present stage the molars are exactly superimposed. The mandibular first molars have rolled inwards, which largely accounts for the opened bite, and this will be partly corrected when the molars are put in place again.

The PRESIDENT remarked on the value of showing cases that were partly finished.

MR. TURNER said it was a sporting case, and that the rolling inwards of the molars caused the opening of the bite, which could have been accomplished by capping the molars.

MR. HOPSON, in reply, undertook to report the progress of the case from time to time and to have the child skiographed to watch the temporo-mandibular articulation and the obliquity of the angle of the mandible.

MR. J. G. TURNER'S CASES.

Case 1 : Lady aged 25.

A premolar on each side absent from the maxilla and both central incisors from the mandible.

Upper anterior teeth pushed over to left side, probably on account of loss of room in the arch following early extraction of temporary teeth. Condition does not seem to have been improved by extraction of the premolars and incisors mentioned above. Treated by expansion (by plates) till there was room to allow alignment of the teeth in a good arch (Fig. 2) and later by pressing the left central and lateral incisors towards the right by wires fixed to a plate, while the molars and premolars were allowed to fall back to their original positions.

Fig. 1 : Before treatment.

Fig. 2 : Midway.

Fig. 3 : At end of treatment.

Fig. 4 : Shews how far the upper overlap the lower teeth owing to decrease in size of lower arch after extraction of centrals.

Case 2 : A girl, aged 15.

With superior protrusion, inferior retrusion, on the left side of one premolar width, on the right of half a premolar width, and centre of lower arch correspondingly deviated to the left ; internal intercusping of left maxillary with left mandibular cheek teeth. Mandibular arch practically normal.

The maxillary arch was expanded and the incisors retracted ; a retention plate was inserted so as to make a posterior bite of the mandible inconvenient. Fig. 4 shews the bite five months after treatment was begun. This was in November, 1906. The bite remains the same now.

No treatment was adopted for the lower arch except to fill the right lower first molar.

Fig. 1 : Before treatment.

Fig. 2 : Arch after treatment.

Fig. 3 : Bite before treatment.

Fig. 4 : Bite after treatment.



CASE I.
(1) Before treatment.



CASE I.
(2) Midway.



CASE I.
(3) At end of treatment.



CASE I.
(4) Shows upper overlap.

TO ILLUSTRATE MR. J. G. TURNER'S CASES.



CASE 2.
(1) Before treatment.



CASE 2.
(2) Arch after treatment.



CASE 2.
(3) Bite before treatment.



CASE 2.
(4) Bite after treatment.

TO ILLUSTRATE MR. J. G. TURNER'S CASES.

